

SPASSKIY, A.G.

Growth of single crystals in nonferrous metal castings. Issl.  
splav.tsvet.met. no.2:135-139 '60. (MIRA 13:5)  
(Nonferrous metals--Foundry) (Crystals--Growth)

5/128/60/000/007/003/017  
A105/A033

16 1210 2408, 1416, 1045

AUTHORS: Fomin, B.A. and Spasskiy, A.G.

TITLE: Heat Resistant Alloys With a Low Heat Expansion Factor

PERIODICAL: Liteynoye proizvodstvo, 1960, No. 7, pp. 32-34

TEXT: The authors discuss the increased use of high-silicon aluminum alloys in various fields of mechanical engineering. These alloys have a lower heat expansion coefficient whereas their wear and heat resistance is higher. Their mechanical properties are rendered satisfactory after modification. To determine the effects of various components on the heat expansion coefficient binary aluminum alloys with 5, 10, 20, 30 and 40% chromium, nickel, iron and silicon were tested. Fig. 1 shows that nickel has a greater effect on the heat expansion coefficient than silicon, while the effect of iron and chromium is lower. The composition of ternary alloys and their heat expansion coefficient are shown in Table 1. The most favourable effect on the heat expansion coefficient was obtained with a titanium alloy. The decrease of the strength limit of binary aluminum-silicon alloys proportional to the increase

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S/128/60/000/007/003/017  
A105/A033

Heat Resistant Alloys With a Low Heat Expansion Factor

of the silicon content is shown in Fig.2. The best results were achieved with ternary aluminum alloys with silicon and titanium. Titanium does not affect the mechanical properties of the alloy or its specific weight. The maximum strength limit of  $\sigma_b = 22 \pm 23$  kg/sq mm at  $\delta = 0.5 \pm 0.7\%$  was determined in alloys containing 23-25% silicon and 1.5-2% titanium. According to tests (Refs. 3 and 4) addition of pure phosphorus or  $Cu_3P$  of the copper-phosphorus is recommended. Investigations of aluminum phosphorides (Refs. 5 and 7) and the filtration of Al-Si alloys (Refs. 8 and 9) showed that the modification results depend on the dispersion and distribution of particles in liquids. A method was investigated by which an equal weight mixture of aluminum phosphide with red phosphorus or its compounds was formed by a thermit reaction. The mixture consisted of 30%  $Fe_2O_3$  powder, 40% aluminum powder and 30% red phosphorus. The thermit mixture was added to the alloy with 0.1% of the charge weight. Ferric oxide can be replaced by manganese or barium oxide. Good results were achieved also with a mixture of 25%  $Ca_3(PO_4)_2$ , 25%  $CaO$ , 50% aluminum powder and a small quantity of red phosphorus. Immersion of this mixture in liquid metal of 830-850°C produced a steady reaction and

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#### Heat Resistant Alloys With a Low Heat Expansion Factor

there was no metal separation or discharge of harmful gases. The effect of the addition shows immediately upon reaction and lasts 3 - 3.5 hours. At prolonged soaking and repeated smelting, the silicon grains become coarser but the effect of the addition can be reestablished by chlorination with 0.2% of manganese chloride 1.5 - 2 hours after the modification and also after repeated smelting. As stated in Ref. 14, the mechanical properties of alloys can be improved by thermal processing. A brief description of two processing methods is given. Figs. 3a and b show cold cast alloys, and Figs. 3c and d, alloys cast in sand molds. The microstructures shown in Figs. 3 are of modified alloys and (a and b) and of alloys (c and d) subjected to additional thermal processing. The effect of the holding time at high temperatures on thermal processing was tested at 840 - 850°C for 15 minutes. The variation curves of the tensile strength limit of the alloy depending on the holding time are shown in Fig. 4. Alloys containing 23 - 25% Si and 1.5 - 2% Ti and modified with thermit phosphorus mixtures are fully suitable for production of pistons. Tensile strength tests on piston crown specimens showed the following results:  $\sigma_b = 15 \pm 16$  kg/sq mm;  $\delta = 0.5\%$ ; HB 90. The tested alloy and the modification method are recommended for the pro-

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A105/A033

### Heat Resistant Alloys With a Low Heat Expansion Factor

duction of pistons of internal combustion engines operating under heavy-duty conditions. There are 4 figures, 1 table and 14 references: 5 Soviet and 9 non-Soviet.

Figure 1

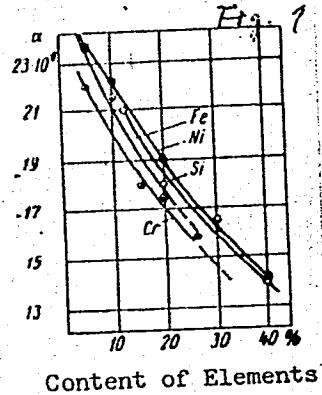


Table 1

№ п/п № оп.	ХИМИЧЕСКИЕ СОСТАВЫ %						$\times 10^{-6}$
	Si	Fe	Ni	Cr	Ti	Al	
1	—	20	—	—	—	—	17,6
2	—	—	—	—	—	—	17,6
3	—	—	—	—	—	—	19,6
4	—	—	—	—	—	—	17
5	10	10	—	—	—	—	19,4
6	10	10	—	—	—	—	19,4
7	10	10	—	—	—	—	19,6
8	10	10	—	—	—	—	19,6
9	10	10	—	—	—	—	17,6

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S/12B/60/000/007/003/017  
A105/A033

Heat Resistant Alloys With a Low Heat Expansion Factor

Figure 2

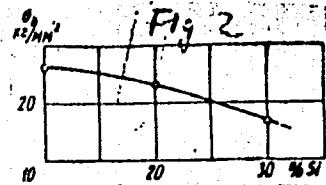


Figure 3

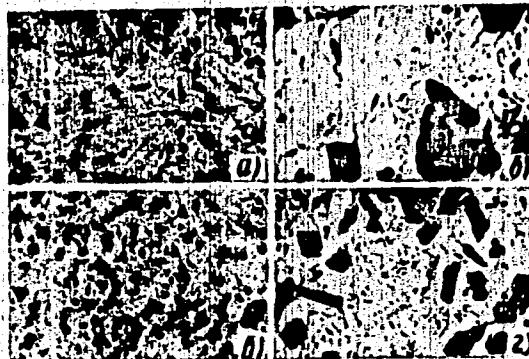
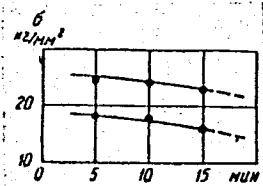


Figure 4



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37869

S/123/62/000/009/013/017  
A052/A101

18.12.10

AUTHORS: Fomin, B. A., Spasskiy, A. G.

TITLE: Investigation of piston alloys on hypereutectic silumin base

PERIODICAL: Referativnyy zhurnal, Mashinostroyeniye, no. 9, 1962, 6, abstract 9G34 ("Sb. nauchn. tr. In-t tsvetn. met. im. M. I. Kalinina", no. 33, 1960, 289-298)

TEXT: To clear up the effect of various components on the coefficient of thermal expansion, binary alloys of aluminum with chromium, nickel, iron and silicon taken in the amount of 5, 10, 20, 30, and 40% each were investigated. It has been established that chromium and iron most intensively reduce the coefficient of expansion of aluminum, followed by silicon and nickel. The effect on the coefficient of expansion of chromium, nickel, iron and titanium additions at a constant silicon content in the alloy was investigated, too. It has been found that the presence of an additional component in an aluminum-silicon alloy reduces the coefficient of thermal expansion to a lower degree than each individual component does, taken in the same quantity as the sum of silicon and this

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A052/A101

Investigation of piston alloys ...

additional component. Only an addition of titanium causes the same change of  
the coefficient as the double silicon content.

[Abstracter's note: Complete translation]

Card 2/2

20035

18.4000 1087 1496 1454 1045

E/015/60/011/008/001/002  
B122/B227

## AUTHORS:

Spaskiy, A. G., Femin, B. A., Oleynikov, S. I.

## TITLE:

Heat treatment of melts and its effect on the mechanical properties of castings

PERIODICAL: Öntöde, v. 11, no. 8, 1960, 167-170

TEXT: The authors produce evidence that by proper heat treatment of the melt the mechanical properties of castings can be improved, and the method is applicable in any foundry without the use of particular additional equipment. V. I. Danilov established that in melts, near the liquidus point, atoms are grouped according to the crystal lattices. These groups break up when the temperature is raised. A. G. Spaskiy and V. V. Rogozhin poured untreated hypoeutectic Alpax into a mold preheated to 700-720°C. The structure of the cast rod specimens was that of irregularly precipitated silicon needles in solid aluminum solution, but also primary silicon crystals were found. Similar specimens, cast at 900-1000°C, showed a structure corresponding to a heat-treated alloy in which the dendrites of the solid solution were uniformly

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20035

Heat treatment of melts and its ...

H/015/60/011/008/001/002  
B122/B227

heat treatment, illustrated by photomicrograms, are presented [Abstracter's note: the photos are not reproducible]: 1) Al, 9% Cu-alloy: temperatures of the 2 batches: 800-900°C and 690-700°C; tensile strengths: untreated alloy: 16-17 kg/mm<sup>2</sup>; elongations: untreated: 1-1.5%; heat-treated: 3-4%; structure: untreated: eutectic between the crystallites of the Al solution forms veins; heat-treated: eutectic is granular. 2) Al, 5% Fe-alloy: temperatures of the two batches: 1000°C and 750°C, respectively; tensile strengths: untreated: 10 kg/mm<sup>2</sup>; heat-treated: 14 kg/mm<sup>2</sup>; elongations 1% and 3.4-4.5% respectively; structure: untreated: coarse Fe precipitates; heat-treated: fine-grained eutectic. 3) grey iron: temperatures of the two batches: 1350°C and 1200°C; tensile strengths: 13-14 kg/mm<sup>2</sup> and 22-28 kg/mm<sup>2</sup>; elongations not given; graphite in the heat-treated alloy has become for the most part eutectic. The authors hope that heat treatment of melts will facilitate the engineering application of alloys so far not used because of their poor mechanical properties. There are 3 figures and 4 Soviet-bloc references.

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FOMIN, B.A.; SPASSKIY, A.G.

Effect of gases on the inoculation of hypereutectic silumins. Lit.  
(MIRA 14:4)  
proizz. no. 4:24-25 Ap '61.  
(Silumin-Metallurgy) (Gases in metals)

AUTHORS:

Spasskiy, A.G.; Pikunov, M.V.; Kurdyumov, A.V.; Lebedev, Ye.A.  
S/128/61/000/012/003/004  
A004/A127

TITLE:

Removing films from metals by filtration

PERIODICAL:

Liteynoye proizvodstvo, no. 12, 1961, 22 - 24

TEXT: The authors point out that quite a number of alloys during melting and pouring are considerably contaminated with oxide films which reduce their technological and mechanical properties and the quality of components. They enumerate a number of metal purification processes and report on tests which were carried out to remove films from aluminum alloys by filtration. These tests were carried out during the semi-continuous casting of ingots of the D16 (D16) and AK6 (AK6) alloys by A.G. Spasskiy, M.V. Pikunov and A.V. Kurdyumov. Prior to the casting process, filtration was studied by simulating metal filtration with water with pieces of paper representing the films. Lumps of crushed magnesite bricks were used as filtering agent. The filtration results showed that a lump filter of 50 mm thickness holds back 50 - 70% of particles 1 x 1 mm in size, while a filter of 100 mm thickness retains 90 - 95% of such particles. During the filtration of the D16 alloy, melted in a graphite cruci-

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Removing films from metals by filtration

ble at 750°C, the lump filter was placed in the spout, which was preheated to 700°C. 5 - 7 ingots 50 mm in diameter and 150 mm high were cast in succession. The number of films and their total area were counted on the fracture. Three lots of ingots were cast - without filtration, with filtration through lumps of magnesite brick of 5 - 10 lump size and with filtration through lumps of a melt consisting of equal parts calcium and magnesium fluorides of the same lump size. As a result of these tests it was found that ingots cast without filtration contained 12% impurities, those with magnesite filtration 3% and with fluoride filtration 1%. This filtration method was tested under service conditions with the AK6 alloy, the tests being carried out by Yu.I. Birevaya, L.A. Kats, S.A. Baranovskiy and A.M. Babarikina. Eleven ingots 110 mm in diameter were cast at a rate of 15 cm/min directly from the melting furnace at 750°C. The following filtering material was used: magnesite brick, an alloy of equal parts of calcium and magnesium fluorides, and magnesite brick impregnated with liquid flux of the 2 compositions: No. 1 - 40% NaF, 60% Na<sub>3</sub>AlF<sub>6</sub>; No. 2 - 64% NaF, 36% NaCl. The following filtering results were obtained: average impurity without filtration 5%; with filtration through magnesite 1.5%; with filtration through magnesite impregnated with No. 1 flux 0.9%; idem with No. 2 flux 0.5%; and filtration through the fluoride alloy 0.3%. Although this filtration meth-

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A004/A127

Removing films from metals by filtration

od yielded good results the metal purity was still insufficient, which could be explained by the fact that the metal, after passing through the filter, ran in an open flow, thus oxidizing again and contaminating with film. Another test series was carried out under industrial conditions with the participation of P. Ye. Khedakov, V.V. Solov'yeva, M.G. Kasheyev and I.I. Ger'yev, where the filtration system was changed in such a way as to prevent the oxidation of the metal after filtration. Under these conditions the average contamination amounted to 1.7% without filtration and 0.24% with filtration. The results obtained make it possible to conclude that filtration through lump filters in the semi-continuous casting of aluminum alloys improves the metal purity considerably as regards film. The filter should be placed in the distributing funnel, while crushed magnesite brick, either with or without flux impregnation, and fluoride alloys can be used as filtering material. Magnesite and fluoride alloys are heavier than aluminum and there is no chemical reaction up to 1,000°C. Further tests with lump filters carried out during pressure casting by M.V. Pikunov, Ye.Ya. Lebedev and A.G. Spasskiy showed the applicability of this filtration method also for pressure casting. Various Al-alloys - AJ9B (AL9V), AJ3Ч (AL3Ch) AJ14Ч (AL14Ch) and others - were cast in this way at the Moskovskiy zavod malo-litrazhnykh avtomobiley (Moscow Small-Displacement Car Plant). Crushed magne-

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Removing films from metals by filtration

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A004/A127

✓

site brick in lumps of 12 - 15 mm, calcinated prior to use at 900°C was used as filtering material. Also the filtration of the IIAM 4-1 (TsAM 4-1) zinc alloy resulted in a considerably improved metal purity. There are 8 figures, 1 table and 7 references: 4 Soviet-bloc and 3 non-Soviet-bloc.

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Improving the mechanical properties of...

S/123/62/000/023/008/008  
A004/A101

alloy has an optimum heating temperature of the "hot" portion at which the highest mechanical properties are attained; besides, the maxima of tensile strength and relative elongation coincide. The mechanical properties of alloys subjected to heat treatment in the liquid state are further improved after their heat treatment in the solid state. The heat treatment of alloys in the liquid state does not present any difficulties in practical operation. There are 2 figures and 6 references.

[Abstracter's note: Complete translation]

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S/128/63/000/001/005/008  
A004/A127

AUTHORS: Ivanov, V.P., Spasskiy, A.G.

TITLE: The effect of Al-oxides on the gas saturation and gassing processes  
in aluminum and Al-alloys

PERIODICAL: Liteynoye proizvodstvo, no. 1, 1963, 26 - 28

TEXT: Aluminum of the grades A00 (A00) and AB00 (AV00) and the Al-alloy  
grades AL 2 (AL2), AL9, AL7, AL12, AMr (AMg), AL8 and AL10B (AL10V), melted in  
electric and gas furnaces in graphite-chamotte crucibles were tested to find out  
the effect of Al-oxides on the gas-saturation and gassing processes, particularly  
with regard to hydrogen. In well-purified and refined melts no gas saturation  
could be effected. Pickling and mechanical cleaning of the surfaces of the ini-  
tial material charges prior to melting results in a considerable reduction of the  
gas content of the melts in refining. The investigations carried out revealed  
that not only aluminum, but also Al-alloys possess a certain passivity with re-  
gard to gas saturation, if they are free from non-metallic impurities. An in-  
creased gas saturation is promoted by aluminum oxides, which have to be removed

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The effect of Al-oxides on the gas saturation ....

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by various methods. The solubility of hydrogen in aluminum not containing hydrogen inclusions amounts to 0.05 - 0.06 cm<sup>3</sup>/100 g at 700°C, while this hydrogen solubility may increase by a factor of up to 20 in the presence of Al-oxides. The authors comment on the test results and point out that a most efficient means of eliminating oxide compounds containing hydrogens is the treatment of melts with chlorine-containing agents. There is 1 table.

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S/149/63/000/001/008/008  
A006/A101

AUTHORS: Ivanov, V. P., Spasskiy, A. G.

TITLE: Refining of aluminum from oxides and gas

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Tsvetnaya metallurgiya,  
no. 1, 1963, 141 - 143

TEXT: The investigation was made for the purpose of studying the effect of overheating temperature and the cooling rate upon the refining of aluminum from oxide inclusions and gas, by chlorination. Grade A00 (A00) and AB000 (AV000) aluminum was used. Contamination of the alloys by oxides was performed by 1) melting of small initial Al bars and 2) reduction of silicon dioxide at 1,100°C. The heats were produced in electric furnaces. The overheating temperatures were: 750, 850 and 1,100°C at cooling rates as high as 5°C and 50°C per minute. Holding time at overheating temperatures was 10 minutes. Refining was made with dehydrated manganese chloride (0.3%) at 720 - 680°C. It was found that Al oxides are subjected to transformations during heating and cooling; this entails their different states. Melts contaminated with oxides by the

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A006/A101

## Refining of aluminum from oxides and gas

melting of a fine, strongly oxidized charge, are well refined from oxides and gas by chlorination at 720 - 680°C, after cooling from overheating temperatures down to 850°C at 5°C and 50°C per minute. Aluminum oxides, independent of their quantitative content and production method, are eliminated from the melt during chlorination after cooling from overheating temperatures up to 1,100°C, at a rate as high as 5°C per minute. During chlorination, aluminum oxides are not eliminated from the melt, if the latter is cooled from the overheating temperature as high as 1,100°C, down to the refining temperature, at 50°C per minute. The aluminum oxides may be in an "active" state in respect to hydrogen and adsorb it from the solution by forming complex, type  $(Al_2O_3)_xH$ , compounds. The elimination of such compounds entails degassing of the melt and its subsequent stability as to hydrogen absorption during water vapor blast or during holding in water vapor atmosphere. Changes in the state of Al oxides by overheating to 1,100°C and subsequent cooling from overheating temperature to below 790°C at 50°C per minute, cause "immunity" of the melts. This "immunity" in respect to gas absorption arises because the oxides obtained as a result of temperature processing of liquid metal, do not adsorb the hydrogen from the solution and do not form complex compounds of the  $(Al_2O_3)_xH$  type, i.e. these oxides are "passive".

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Refining of aluminum from oxides and gas

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A006/A101

in respect to hydrogen.

ASSOCIATION: Moskovskiy institut stali i splavov (Moscow Institute of Steel  
and Alloys) Kafedra liteynogo proizvodstva (Department of Foundry  
Practice)

SUBMITTED: August 11, 1962

Card 3/3

SPASSKIY, A.G.; PIKUNOV, M.V.; ROGOVA, S.T.

Certain conditions for the purification of melts by recrystallization.  
Issl. splav. tsvet. met. no.4:75-84 '63. (MIRA 16:8)

(Liquid metals) (Crystallization)

MA TSZYA-TSZI [Ma Chia-chi]; SPASSKIY, A.G.

Investigating the effect of composition and temperature conditions  
on the hot shortness of shell cast aluminum-magnesium alloys. Izv.  
vys. uchob. zav.; tsvet. met. 6 no.3:125-127 '63. (MIRA 16:9)

1. Krasnoyarskiy institut tsvetnykh metallov, kafedra liteynogo  
proizvodstva.

(Aluminum-magnesium alloys--Brittleness)  
(Thermal stresses)

L 40760-65 EPF(c)/EPF(n)-2/EPR/EPA(s)-2/EPA(t)-2/EWP(k)/EWT(d)/EWT(m)/EWP(h)/T/  
EWP(i)/EWP(b)/EWA(d)/EWP(l)/EWP(e)/EWP(v) Pf-4/Pq-4/Pr-4/Ps-4/Pt-10/Pu-4/Pab-10

WH/WN/JG

ACCESSION NR: AP5012325

UR/0286/64/000/022/0067/0067

AUTHOR: Blyumshteyn, Z. G.; Cherepanov, V. S.; Miftakhov, E. Z.; Spasskiy, A. G.;  
Fomin, B. A.; Koroleva, N. P.

TITLE: Temperature sensing system for manometric thermometers. Class 42, No. 166520 76  
75  
B

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 22, 1964, 67

TOPIC TAGS: 0 thermometer \

Translation: A patent has been issued for a temperature system used in manometric thermometers. The unit contains a temperature bulb and a capillary tube. In order to expand the upper measurement limit, the filler which is used is an alloy containing 66.8-67.2% gallium, 20.3-20.7% indium and 12-13% tin and the bulb is made of a material which is stable with respect to the filler at high temperatures, e. g. alumundum or another ceramic or cermet material based on quartz. 16

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L 40760-65

ACCESSION NR: AP5012325

ASSOCIATION: Tsentral'noye proyektno-konstruktorskoye byuro teploenergeticheskogo priborostroyeniya (Central Planning and Design Office of Heat and Power Engineering Equipment)

SUBMITTED: 00

NO REF SOV: 000

ENCL: 00

OTHER: 000

SUB CODE: TD

JPRS

Card 2/2 m/s

ACC NR: AR6013851

(A, N)

SOURCE CODE: UR/02/6/65/000/011/0016/0016

AUTHORS: Lovtsov, D. P.; Ryumshin, V. M.; Spasskiy, A. G.

46

TITLE: The influence of the purity of metals on the structure of silumin

B

SOURCE: Ref. zh. Tekhnologiya mashinostroyeniya, Abs. 11G132

REF SOURCE: Sb. Lit'ye i obrabotka splavov chern. i tsvetn. met. Krasnoyarsk, 1965,  
43-45

TOPIC TAGS: metal crystallization, metal heat treatment, silumin, metal property,  
alloy

ABSTRACT: The theory stating that modified structure of silumin may be obtained  
without the introduction of modifying admixtures is reiterated. This theory proposes  
that such a modified structure will result from superheating the melt at above 900--  
1000C and subjecting it to rapid crystallization. It is noted that even small con-  
centrations of admixtures may basically alter the microstructure of the alloy and,  
consequently, its mechanical and physical properties. 4 illustrations. Bibliography  
of 4 titles. Translation of abstract

silicon 27  
aluminum 27

SUB CODE: 11

Card 1/1 af

UDC: 621.745:669.715

L 28915-66 EWT(m)/EWP(t)/ETI IJP(c) MM/JD/JG

ACC NR: AP6019107

SOURCE CODE: UR/0136/66/000/002/0084/0085

AUTHOR: Koroleva, N.P.; Spasskiy, A.G.; Fomin, B.A.

ORG: none

38  
B

TITLE: Determining composition and crystallization temperature of the ternary eutectic in the system gallium-indium-tin

SOURCE: Tsvetnyye metally, no. 2, 1966, 84-85

TOPIC TAGS: metal crystallization, thermal analysis, melting point, gallium alloy, indium alloy, tin alloy

ABSTRACT: The composition of the ternary eutectic (67% Ga, 20.5% In and 12.5% Sn) was determined by means of holding the liquid alloy close to the eutectic composition at the crystallization temperature of the ternary eutectic with subsequent removal of the excess components by filtration.

By thermal analysis, melting point of the ternary eutectic was found to be +10.6°C. Accuracy of measurement during differential recording depends on an accurately selected cooling rate of the alloy.

Cooling of the eutectic alloy in the study of supercooling was done without crystallization at the rate of 2.2 deg/min.

The alloy (67% Ga, 20.5% In, 2.5% Sn) cooled to +6.0°C can exist in the supercooled state more than 6 hours. Alloys, differing in composition from the eutectic composition, can remain in the liquid state only several minutes during supercooling. Orig. art. has; 1 figure. [JPRS]

SUB CODE: 11, 20/ SUBM DATE: none/ ORIG REF: 001/ OTH REF: 003  
Card 1/1 CC UDC: 669.871'872'6:620.18

AUTHOR: Spasskiy, A.N. SOV/113/58-4-11/21

TITLE: The Calculation of Interoperational Tolerances in Grinding  
(Raschet mezhoperatsionnykh dopuskov pri shlifovanii)

PERIODICAL: Avtomobil'naya promyshlennost', 1958, Nr 4, pp 30-32 (USSR)

ABSTRACT: In order to set up active control of the dimensions of parts during the grinding process, the Gor'kiy Automobile Plant has carried out investigations into the operation of the automatic lines for the piston pin and the king-pin of the swivel cam of the GAZ-51 automobile. The dimensions of the parts were measured with a beam gage having a multiplying factor of 0.002 mm. For each machine spot diagrams (Figure 1) were prepared; these compared the dimensions of a part with those of the one released before. The wear of the grinding disk is the important factor to be taken into consideration in the calculation which is presented and illustrated graphically and on tables. There are 4 graphs, 2 tables and 11 references, 8 of which are Soviet, 2 English and 1 German.

ASSOCIATION: Gor'kovskiy avtozavod (The Gor'kiy Automobile Plant).  
1. Grinders--Performance 2. Machine tools--Control systems  
3. Materials--Measurement

Card 1/1

SPASSKIY, A.N., assistant

Using the method of "flowing dimensions" in the analysis  
according to rising deviations. Izv.vys.ucheb.zav.; mashinostr.  
no.6:162-171 '59. (MIRA 13:5)

1. Gor'kovskiy politekhnicheskiy institut.  
(Mathematical statistics) (Production control)

SPASSKIY, A.N., assistant

Statistical control and analysis of the precision of technological processes by means of the method of average absolute deviations.  
Izv. vys. ucheb. zav., mashinostr. no.3:83-91 '65.

(MIRA 18:6)

1. Gor'kovskiy politekhnicheskiy institut.

ACC NR: AT60264.63

(A,N)

SOURCE CODE: UR/3152/65/000/009/0003/0011

AUTHOR: Urupov, A. K.; Spasskiy, B. A.

ORG: none

TITLE: Use of seismic recordings with an automatic regulator of amplification in determining dynamic characteristics by the reflected wave method

SOURCE: Razvedochnaya geofizika, no. 9, 1965, 3-11

TOPIC TAGS: reflected shock wave, seismologic instrument

ABSTRACT: The authors discuss the possibility of making the method of identification of reflected waves quantitative. For this purpose, the signals received by the instrument are amplified by means of an automatic regulator of amplification. In general, the method is based on the damping of oscillations, which is produced either by dissipation or absorption of the energy. The authors reached the following conclusions: the "beta" parameters are smaller when the regulator is used. In general, the results are comparable whether the regulator is automatic or exponential or no regulator used at all. In the case of either regulator, harmonics should be identified and eliminated from the seismogram. Orig. art. has: 4 figures.

SUB CODE: 08/ SUBM DATE: none/ ORIG REF: 002

Card 1/1

L 38900-66 EMT(1)  
ACC NR: AP6029724

SOURCE CODE: UR/0109/66/011/005/0966/0967

AUTHOR: Zernov, D. V.; Timofeyev, P. V.; Fursov, V. S.; Migulin, V. V.; Srivak, G. V.; Spasskiy, B. I.; Nilender, R. A.; Grozdover, S. D.; Shemayev, A. M.; Solntsev, G. S.; Kuzovnikov, A. A.; Zaytsev, A. A.; Vasil'yeva, M. Ya.; Mitsuk, V. Ye.; Dubinina, Ye. M.; Zheludeva, G. A.

ORG: none

TITLE: Nikolay Aleksandrovich Kaptsov

SOURCE: Radiotekhnika i elektronika, v. 11, no. 5, 1966, 966-967

TOPIC TAGS: electric engineering personnel, magnetron, klystron, corona discharge, gas conduction, gas discharge plasma

ABSTRACT: N. A. Kaptsov passed away 10 February 1966. He was a student of the famous P. N. Lebedev, and performed many fundamental investigations in the development of modern electronics. He was the creator and leader of the chair of electronics of Moscow State University. He developed the concept of phase grouping of electrons. His ideas are the basis for the development of the magnetron and klystron.<sup>15</sup> He developed the concept explaining the phenomenon of corona discharge. He also developed ideas connected with formation of gas conduction and phenomena in a gaseous-discharge plasma. Kaptsov served for years as the head of the physical laboratory and consultant to the Moscow Electron Tube Plant. He was the author of numerous books, including "Physical Phenomena in Vacuum and in Gases", which was translated into foreign languages; he also created and taught numerous electronics courses. [JPRS: 36,501]

SUB CODE: 05, 09 / SUBM DATE: none

Card 1/1MLP

0718 0203

KUDRYAVTSEV, P.S., prof.; SPASSKIY, B.I., dots.; MAKAROVA, V.I., kand.  
filos. nauk; NIKOLAYEV, B.L., tekhn. red.

[Programs of pedagogical institutes; the history of physics;  
major: physics] Programmy pedagogicheskikh institutov: istoriya  
fiziki. Spetsial'nost' - fizika. [Moskva] Uchpedgiz, 1956. 5 p.  
(MIRA 11:9)

1. Russia (1917- R.S.F.S.R.) Glavnaya upravleniye vyshikh i  
srednikh pedagogicheskikh uchebnykh zavedeniy.  
(Physics—Study and teaching)

SPASSKIY, B.I.; DUKOV, V.M., redaktor; MIKHAYLOVA, T.A., tekhnicheskij  
redaktor

[A history of physics] Iстория физики. [Moskva] Izd-vo Moskovskogo  
univ. Pt.1. [From ancient times to the beginning of the 19th century]  
Ot drevnosti do nachala XIX veka. 1956. 358 p. (MLRA 10:2)  
(Physics--History)

KUKARKIN, Boris Vasil'yevich, prof.; RYBNIKOV, Konstantin Alekseyevich, prof.; BASHMAKOVA, Izabella Grigor'yevna; YUSHKEVICH, Adol'f Pavlovich; YANOVSKAYA, Sof'ya Aleksandrovna; SPASSKIY, Boris Ivanovich, dotsent; MIKHAYLOV, Glib Konstantinovich, starshiy nauchnyy sotrudnik; MATYNOV, D.Ya., prof., otv.red.; GORDEYEV, D.I., prof., red.; IVANENKO, D.D., prof., red.; KUDRYAVTSEV, P.S., prof., red.; KULIKOVSKIY, P.G., dotsent, red.; KHRGIAN, A.Kh., prof., red.; SHEVTSOV, N.S., prof., red.; VERKHUNOV, V.M., assistant, red.; KONONKOV, A.P., red.; YERMAKOV, M.S., tekhn.red.

[Programs of courses on the history of the physicomathematical sciences] Programmy po istorii fiziko-matematicheskikh nauk. Moskva, 1959. 40 p. (MIRA 12:12)

1. Moscow. Universitet. 2. Orgkomitet Vsesoyuznoy mezhvuzovskoy konferentsii po istorii fiziko-matematicheskikh nauk (for Kukarkin, Rybnikov, Spasskiy, Gordeyev, Ivanenko, Kudryavtsev, Kulikovskiy, Mikhaylov, Khrgian, Shevtsov, Verkhunov, Kononkov).

(Physics--Study and teaching)  
(Mathematics--Study and teaching)

SPASSKIY, B.I.

V.I.Lenin and physics; on the 50th anniversary of the appearance  
of V.I.Lenin's "Materialism and empiriocriticism." Vest.Mosk.un.  
Ser.mat., mekh., astron., fiz., khim. 14 no.1:3-16 '59.  
(MIRA 13:8)

(Lenin, Vladimir Il'ich, 1870-1924)  
(Physics)

SPASSKIY, B.I.

Review of the origin and development of the relativity theory.  
Ist.i metod.est.nauk no.1:5-60 '60. (MIRA 14:10)  
(Relativity (Physics))

SPASSKIY, B.I.

N.N.Pirogov's research on the statistical foundations of the  
second law of thermodynamics. Ist.i metod.est.nauk no.1:61-88  
'60. (MIRA 14:10)

(Thermodynamics)

KONONKOV, Arkadiy Fedorovich; SPASSKIY, B.I.

[M.V.Lomonosov as a physicist] M.V.Lomonosov kak fizik.  
Moskva, Izd-vo Mosk. univ., 1961. 155 p. (MIRA 15:4)  
(Lomonosov, Mikhail Vasil'evich, 1711-1765)

KUDRYAVTSEV, P.S., prof., otv. red.; FIGUROVSKIY, N.A., prof.,  
red.; IVANENKO, D.D., prof., red.; SPASSKIY, B.I., dots.,  
red.; YAKOVLEV, V.A., dots., red.; MINCHENKO, L.S., kand.  
fiz.-mat. nauk, red.; BRAUDE, M.V., kand. filos. nauk, red.;  
LEZHNEVA, O.A., kand. fiz.-mat. nauk, nauchn. red.

[Problems on the history of physics and its teaching; reports  
and materials] Voprosy istorii fiziki i ee prepodavaniia; do-  
klady i materialy. Tambov. Tambovskii pedagog. in-t. 1961.  
225 p. (MIRA 17:4)

1. Mezhvuzovskaya konferentsiya po istorii fiziki. 1st. Tambov.

SPASSKIY, B.I.

M. V. Lomonosov and the progress of physics: on the 250th anniversary of his birth. Usp. fiz. nauk 75 no.3:397-410 N .6].

(MIR 14:11)

(Lomonosov, Mikhail Vasil'evich, 1711-1765)

(Physics--Research)

SIVOKON', P.Ye.; SPASSKIY, B.I., dote.; LEONT'YEV, V.M., red.;  
LAZAREVA, L.V., tekhn. red.

[Origin and philosophical nature of scientific experiment]  
O proiskhozhdenii i filosofskom znachenii estestvenno-  
nauchnogo eksperimenta. Moskva, Izd-vo Mosk. univ., 1962.  
201 p. (MIRA 15:5)

(Science--Philosophy)

RYBNIKOV, K.A., prof., red.; SPASSKIY, B.I., dots., red.; KUDRYAVTSEV,  
P.S., prof., red.; KULIKOVSKIY, P.G., dots., red.; LITINETSKIY,  
I.B., dots., red.; MIKHAYLOV, G.K., st. nauchnyy sotr., red.;  
VERKHUNOV, V.M., kand. fiz.-matem. nauk, red.; KOMONKOV, A.F.,  
kand. fiz.-matem. nauk, red.; SOROKINA, L.A., nauchnyy red.;  
VERKHUNOV, V.M., nauchnyy red.; GRIDASOVA, Ye.S., red.izd-va;  
GOROKHOVA, S.S., tekhn. red.

[Problems of the history of the physical and mathematical sci-  
ences] Voprosy istorii fiziko-matematicheskikh nauk. Moskva, Gos.  
izd-vo "Vysshiaia shkola," 1963. 522 p. (MIRA 16:7)  
(Physics) (Mathematics)

SARANGOV, TS.S.; SPASSKIY, B.I.

Role of analogy in the discovery of quantum mechanics. Ist.  
(MIRA 16:11)  
i metod. est. nauk 2:183-208 '63.

SARANGOV, TS.S.; SPASSKIY, B.I.

Role of models and analogy in the history of physics. Vest. Mosk. un. Ser. 3:Fiz., astron. 18 no.5:96-103 S-0 '63. (MIRA 16:10)

1. Kabinet istorii fiziki Moskovskogo gosudarstvennogo universiteta.

SPASSKIY, Boris Ivanovich; GOL'DENBERG, G.S., red.

[History of physics] Istoryia fiziki. Moskva, Izd-vo  
Mosk. univ. Pt.2. 1964. 299 p. (MIRA 17:6)

FRENK, A.M.; SPASSKIY, B.I., prof.

From the history of optics in the 17th century (Huygen's optics). Ist. i vved. est. nauk no.3:192-196 '65.

(MIRA 18-12)

SPASSKIY, B. P.

23061 Osobennosti ionizatsii nishnikh sloev atmosfery v rayone sela inshneye  
ivkino kiravskoy oblasti. Uchen zapiski (Kirovskiy gos. Ped. In-t  
im. Lenina), vyp. 5, 1948, C. 41-57.

SO: LETOPIS' NO. 31, 1949

SPASSKIY, D.S.

Bay for all-purpose amplifiers. Avtom., telem. i sviaz' no.6:21-23  
Je '57.

(Amplifiers, Electron-tube)

(MIRA 10:7)

SPASSKIY, D.S.

~~How it was. Avtom., telem. i sviaz' 2 no.5:36-39 My '58.~~

(MIRA 11:5)

(Radio--History)

TREYVAS, L.A., inzh.; SPASSKIY, D.S., inzh.

Remote control of diesel locomotives and electric rolling stock.  
Elek. i tepl. tiaga 4 no. 12:42-43 D '60. (MIRA 14:1)

(Germany, West--Railroads--Trains)

(Germany, West--Remote control)

"APPROVED FOR RELEASE: 08/23/2000

CIA-RDP86-00513R001652630010-7

TANTSYURA, A.A., inzh.; SPASSKIY, D.S.

Radio electronics and the conquest of outer space. Avtom.,  
telem. i sviaz' 5 no.7:3-7 JI '61. (MIRA 14:10)  
(Electronics) (Space flight)

APPROVED FOR RELEASE: 08/23/2000

CIA-RDP86-00513R001652630010-7"

SPASSKIY, D.S.

Adapter for connecting private telephones into the centralized traffic control system of a railroad. Avtom., telem. i sviaz' 5 no.11:17-19 N '61. (MIRA 14:11)  
(Railroads--Signaling) (Railroads--Communication systems)

SPASSKIY, D., Izobretatel'

Problems on railroad tracks. Izobr. i rats. no. 1647 Ja '62.  
(MIRA 14:12)

(Railroads--Track)

KOZLOV, V.B.; LYSENKO, I.M.; MATVEYEV, A.N.; TRAKHTENBERG, M.V.; USPENSKIY, Ye.I.; GURVICH, A.K.; BESPALOV, B.N., inzh., retsentent; SPASSKIY, D.S., inzh., red.; MEDVEDEVA, M.A., tekhn. red.

[Flaw detection in rails] Rel'sovaia defektorskopiia. [By] V.B.Kozlov i dr. Izd.2., perer. i dop. Moskva, Transzheledorizdat, 1963. 286 p. (MIRA 16:8)

(Railroads--Rails--Defects)  
(Nondestructive testing)

SPASSKIY, D.S.

Thermite-muffle welding of lead-in wires. Avtom., telem. i svias'  
6 no.1:32 Ja '62. (MIRA 15:3)  
(Electric lines—Welding)

SPASSKIY, D.S.

Safety measures in the use of electrical tools. Avtom., telem.i  
sviaz' 6 no.2:12-14 F '62. (MIRA 15:3)  
(Power tools—Safety measures)

SPASSKIY, D.S.

A fir from the forest. Avtom., telem. i sviaz! 9 no.12:  
38 D '65. (MIRA 19:1)

SPASSKII, F.

TECHNOLOGY

SPASSKII, F. Budowa lotnisk; wskonywanie robot. Pod ogolna redakcja F. Spasskiego. Wydawn. Ministerstwa Obrony Narodowej, 1955. 487 p.

Monthly List of East European Accessions (ELAI) LC Vol. 8, no. 5  
May 1959, Unclass.

BAKHNUTSKAYA, E.Ya. (Khar'kov); PRUDNIKOV, V.Ye. (Moscow); ROSSINSKIY, S.D. (Moscow); DEPMAN, I.Ya. (Leningrad); SHOSTAK, R.Ya. (Moscow); PIKHTENGOL'TS, G.M. (Leningrad); SPASSKIY, I.G. (Leningrad); GUSSOV, V.V. (Vladivostok); RYBKIN, G.Y., redaktor; YUSHKEVICH, A.P., redaktor.

[Historical studies in mathematics. Vol. 5] Istoriko-matematicheskie issledovaniia. Moskva, Gos. izd-vo tekhniko-teoreticheskoi lit-ry, 1952. (MLR 6:5) 472 p. Vol. 5.

1. Moscow. Universitet. Seminar po istorii matematiki. (Mathematics) (Osipovskii, Timofei Fedorovich, 1765-1832) (Peterson, Karl Mikhailovich, 1828-1881) (Letnikov, Aleksei Vasil'evich, 1837-1888)

SPASSKIY, I.G. (Leningrad)

K.K.Prints, the inventor of the centesimal platform weighing machine.  
Izv. AN SSSR Otd.tekh.nauk no.11:134-151 N '54. (MIRA 8:4)  
(Weighing machines--History) (Prints, Konstantin Kornil'evich,  
b. 1778--)

SPASSKIY, I. G.

Dissertation defended for the degree of Doctor of Historical Sciences at the  
Institute of Archeology

"Money Economy of the Russian State During the XVI-XVII Centuries."

Vestnik Akad. Nauk, No. 4, 1963, pp 119-145

BUDANOV, G.V., otv. za vypusk.; REZNIKOV, A.I., otv. za vypusk.; SPASSKLY.  
I.K., red.; PEVZNER, A.S., red. izd-va.; PRUSAKOVA, T.A., tekhn. red.

[Coat manual for the assembling of equipment] TSennik na montazh  
oborudovaniia. Moskva, Gos. izd-vo lit-ry po stroit., arkhit. i  
stroit. materialam. No. 19. [Equipment for the petroleum and gas  
industries] Oborudovanie predpriatii neftianoi i gazovoi  
promyshlennosti. 1958. 54 p. (MIRA 11:12)

1. Russia (1923- U.S.S.R.) Gosudarstvennyy komitet po delam  
stroitel'stva.

(Petroleum industry--Equipment and supplies)  
(Gas manufacture and works--Equipment and supplies)

KOVAL', V.A., inzh.; KRYUCHKOV, I.V., inzh.; LIKHNITSKIY, G.V., inzh.;  
PODSVYADEK, A.V., inzh.; SPASSKIY, K.F., inzh.

New weighing instruments. Mekh.i avtom.proizv. 15 no.11:46-48  
(MIRA 14:11)  
N '61.  
(Scales (Weighing instruments))

L 19349-63 EWP(q)/EWT(m)/BDS AFFTC/ASD JD  
ACCESSION NR: AR3005188 S/0272/63/000/007/0036/0036  
SOURCE: RZh. Metrologiya i izmer. tekhnika. Otd. vy\*p., Abs. 7.32.243  
AUTHOR: Berkina, S. S., Likhnitskiy, G. V., Spasskiy, K. F. 56  
TITLE: Study of the process of constraint of force measuring elements of tensometric resistance pickups for investigating the stabilization of their elastic properties  
CITED SOURCE: Tr. Odessk. tekhnol. in-ta pishch. i kholodil'n. prom-sti, v. 11, 1962, 165-169

TOPIC TAGS: tensometer calibration, tensometer, stress pickup, elasticity

TRANSLATION: The authors describe a testing procedure for investigating the effect of the time of constraint of the flexible elements of stress pickups with respect to the stabilization of their elastic properties. The results of the experiment showed that the duration of application to the sample of a load producing in it stresses close to the proportionality limit does not affect the magnitude of its absolute deformation if the time of load application is not over

Card 1/2

L 19349-63  
ACCESSION NR: AR3005188

30-40 min. With loading of 30-70 min duration, the magnitude of the absolute deformation falls off. After 70-80 min of load application, the absolute deformation of the sample remains practically constant. Further studies showed that the increased sample rigidity acquired during the process of constraint is retained in time. N. Komissarova.

DATE ACQ: 24Jul63

SUB CODE: GE

ENCL: 00

Card 2/2

S/122/62/000/005/001/004  
D234/D308

AUTHOR: Spasskiy, K.N., Engineer

TITLE: Centrifugal pumps with rotating body

PERIODICAL: Vestnik mashinostroyeniya, no. 5, 1962, 25 - 29

TEXT: The author describes a method of designing scoop pumps developed at BNFM (VIGM) in 1959-60. In the design scheme according to which the moment and head characteristics were determined, the space motion of liquid particles is substituted by concentric circular motion, and the profile of the body by a half-body. Equations for the characteristics are deduced. A pump model for checking the design results and for obtaining experimental characteristics is described. Results of tests are given; the advantages of the pumps are high efficiency (35 to 53 %), head about 1.5 times higher than in usual centrifugal pumps etc. Scoop pumps are recommended for industrial purposes where small dimensions and weight as well as high reliability is required. Use of pumps made of non-metallic

Card 1/2

S/122/62/000/005/001/004  
D234/D308

Centrifugal pumps ...

materials is recommended for chemical industry. There are 5 figures.

Card 2/2 .

ACC NR: AF/002616 (A,N) SOURCE CODE: UR/0413/66/000/023/0130/0130

INVENTOR: Ivanov, V. V.; Shcheglov, G. M.; Spasskiy, K. N.; Karakhan'yan, V. K.; Prudovskiy, B. M.; Semenov, M. I.; Sergeyev, V. A.; Smirnov, I. N.; Britvin, L. N.; Shtel'makh, A. A.

ORG: None

TITLE: An impeller. Class 59, No. 189315 [announced by the All-Union Scientific Research Institute of Hydraulic Machine Building (Vsesoyuznyy nauchno-issledovatel'skiy institut gidromashinostroyeniya)]

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 23, 1966, 130

TOPIC TAGS: centrifugal pump, blade profile, metal blade, pump component

ABSTRACT: This Author's Certificate introduces: 1. An impeller for an open centrifugal pump. Pump efficiency is improved and the rigidity of the impeller blades is increased by making the blades in the cylindrical section with a channel shape. The walls of the blade channel are recurved toward the front at a sharp angle to the walls of the pump housing. 2. A modification of this impeller in which the blade channel formed in the cylindrical section has a flat bottom. 3. A modification of this impeller with U-shaped grooves in the flat bottom of the channel on the working side of the blade. These grooves are adjacent to the end surfaces of the blades.

Card 1/2

UDC: 621.671.1-253.5

ACC NR: AP7002616

4. A modification of this impeller equipped with a flat annular rim connected to each blade at the middle of its end sections. 5. A modification of this impeller equipped with flat ribs which connect the middle of the end section on the back side of each blade to the central section of the working side of the following blade.

SUB CODE: 13/ SUBM DATE: 13Jul65

Card 2/2

VEKLINKO, A.F.; SPASSKIY, K.S.; KHRUSHCHOV, A.A.

New stationary motion-picture projector for the showing of narrow-width films. Trudy NIKFI no.7:199-207 '47. (MIRA 11:6)

1. Laboratoriya zvukovospriyvedeniya Nauchno-issledovatel'skogo  
kino-foto-instituta, Moskva.  
(Motion-picture projection--Equipment and supplies)

KISS, N.L., inzh.; SPASSKIY, L.A., inzh.; DERFEL', V.M., inzh.

Shield method of digging ventilation tunnels for a blast furnace  
unit. Prom. stroi. 40 no.7:37-40 '62. (MIRA 15:7)

1. Trest Tulshakhtstroy.  
(Tunneling) (Blast furnaces)

SPASSKIY, M.F.; STRAKHOV, P.I. KHIGLIAN, A.Kh., professor, redaktor;  
GIGILOVA, V.A. -edaktor; AKHLLAMOV, S.N., tekhnicheskij  
redaktor

[Selected works on the physics of the atmosphere] Izbrannye  
raboty po fizike atmosfery. Redaktsiya i primechanija A. Kh.  
Khigliana. Moskva, Gos.izd-vo tekhniko-teoreticheskoi lit-ry,  
1951. 342 p.  
(Atmosphere)

(MLRA 8:10)

SPASSKIY, M. N.; UTEVSKIY, L. M.; KHASHIMOV, F. R.

"On the peculiarities of martensite forming in deformed austenite."

report submitted for 3rd European Regional Conf, Electron Microscopy, Prague,  
26 Aug-3 Sep 64.

S/137/62/000/005/018/150  
A006/A101

AUTHORS: Spasskiy, M. N., Utevskiy, L. M.

TITLE: High-frequency vacuum melting furnace

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 5, 1962, 52, abstract 5V309  
("Sb. tr. In-t metalloved. i fiz. metallov Tsentr. n.-i. in-ta  
chernoy metallurgii", 1959, v. 6, 520 - 526)

TEXT: A description is given of a new design of a high-frequency vacuum melting furnace and its operation during one year. The melting time in the furnace is 40 - 60 min. The main characteristic feature in the furnace design is the method of fixing a double-wall water-cooled quartz tube and the installation of the crucible and the mold in it. To prepare the furnace for the heat, the quartz tube is not to be removed. The vacuum system, consisting of a diffusion (H-5) and forevacuum (BH-1) pump, produces a pressure in the furnace of  $< 10^{-4}$  mm Hg. The inductor displacement requires a minimum force. The stopper device ensures the necessary holding of the metal in liquid state and vacuum casting. The furnace design ensures convenient and safe operation.

D. Kashayeva

[Abstracter's note: Complete translation]

Card 1/1

SPASSKIY, M.N.; YAKHONTOV, A.G.

Preparation of objects from massive metal samples for direct study in  
an electron microscope. Zav.lab. 30 no.12:1490 '64.

(MIRA 18:1)

1. Tsentral'nyy nauchno-issledovatel'skiy institut chernoy metallurgii  
im. I.P.Bardina.

J. 27450-66 EWT(m)/EWA(d)/I/EWP(t)/EWP(k)/EWP(z)/EWP(b)/EWA(c). JD/HW  
ACC NR. AP5027150

UR/0126/65/020/004/0614/0621

38  
37

AUTHOR: Spasskiy, M.N.; Utevskiy, L.M.; Khashimov, F. R.

ORG: Central Research Institute for Ferrous Metallurgy im. I.P. Bardin  
(Tsentral'nyy nauchnoissledovatel'skiy institut chernoy metallurgii)

TITLE: Structure of martensite and its changes as a result of heat and mechanical working

SOURCE: Fizika metallov i metallovedeniye, v.20, no.4, 1965, 614-621

TOPIC TAGS: martensite steel, austenite steel, work hardening, metal heat treatment

ABSTRACT: The article presents the results of an electron microscope investigation of the fine structure of martensite and the dimensions and the disorientation of its blocks and fragments. It compares the results of tests after conventional hardening and after heat and mechanical treatment. Samples of alloy N30F2 and steel 40N27 were prepared by cold rolling in the form of strips approximately 0.1 mm thick. Heat and mechanical treatment of the previously annealed strip was supplemented by rolling at 550°. After this treatment, the samples of alloy N30F2 and steel 40N27 were almost completely austenitic. The twinning of martensite crystals, observed in iron-nickel alloys, is found also in

UDC: 539.25

Card 1/2

2

L 27450-66

ACC NR: AP5027150

other alloys, including steels with a martensite point below 200°. A twinned structure is also characteristic of 40N27 steel. The relatively low density of defects in martensite alloy N30F2 makes it possible to observe the effect of the austenite deformation on the structure of the martensite forming within it. The experimental results show that a 40% deformation of the austenite before the transition leads to creation of a very high density of defects in the martensite. The authors conclude that the heat and mechanical treatment of steel leads to supplementary breaking up of the martensite crystals into fragments, whose size corresponds to the size of the cells of the dislocation structure of the deformed austenite. The reciprocal disorientation of the fragments reaches 10-15%. Orig. art. has: 8 figures.

SUB CODE: MM/ SUBM DATE: 22Jul64/ ORIG REF: 005

OTH REF: 003

Card 2/2 90

10129/0131

L 18743-66

ACC NR: AP6003145

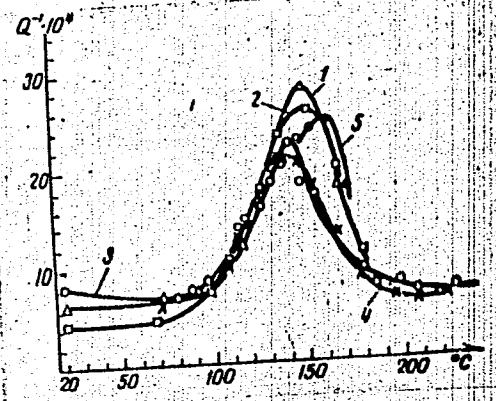


Fig. 1. Temperature dependence of internal friction at various frequencies:  
1 - 0.83; 2 - 1.0; 3 - 1.0; 4 - 0.7; 5 - 1.35 cps in the specimens:  
1 - carburized in graphite; 2 - carburized in CO; 3,4 - decarburized;  
5 - with original C concentration

Card 2/3

ACC NR: AP6005145

formed in a hydrogen atmosphere. This was followed by radiometric measurements of successively removed layers by a previously developed method (Cruzin, P. L. DAN SSSR, 86, 2, 289) and, on this basis, the plotting of the curves of C concentration. As can be seen from the curves of the temperature dependence of internal friction in Fig. 1, the peak for the specimens carburized in graphite is higher than for the original specimens and lower than for the decarburized specimens; this confirms that the peaks are conditioned by C. The diffusion coefficients of C in Cr are close to the diffusion coefficients of N in Cr; a similar phenomenon is observed in Fe. Explanations: both in Cr and in Fe the elements N and C form solid interstitial solutions with the same interaction between the dissolved elements and matrix. The findings confirm the validity of extrapolating to the low-temperature region the temperature dependence of diffusion coefficients obtained for high temperatures if there are no phase transformations. Thus, the coefficients of diffusion of C in the solid solution of C in Cr at temperatures of 1150-1600°C and 140-162°C are expressed by a general temperature dependence corresponding to the equation  $D = 8.75 \cdot 10^{-3} \exp(-26,500/RT)$ . Orig. art. has: 2 figures, 1 table.

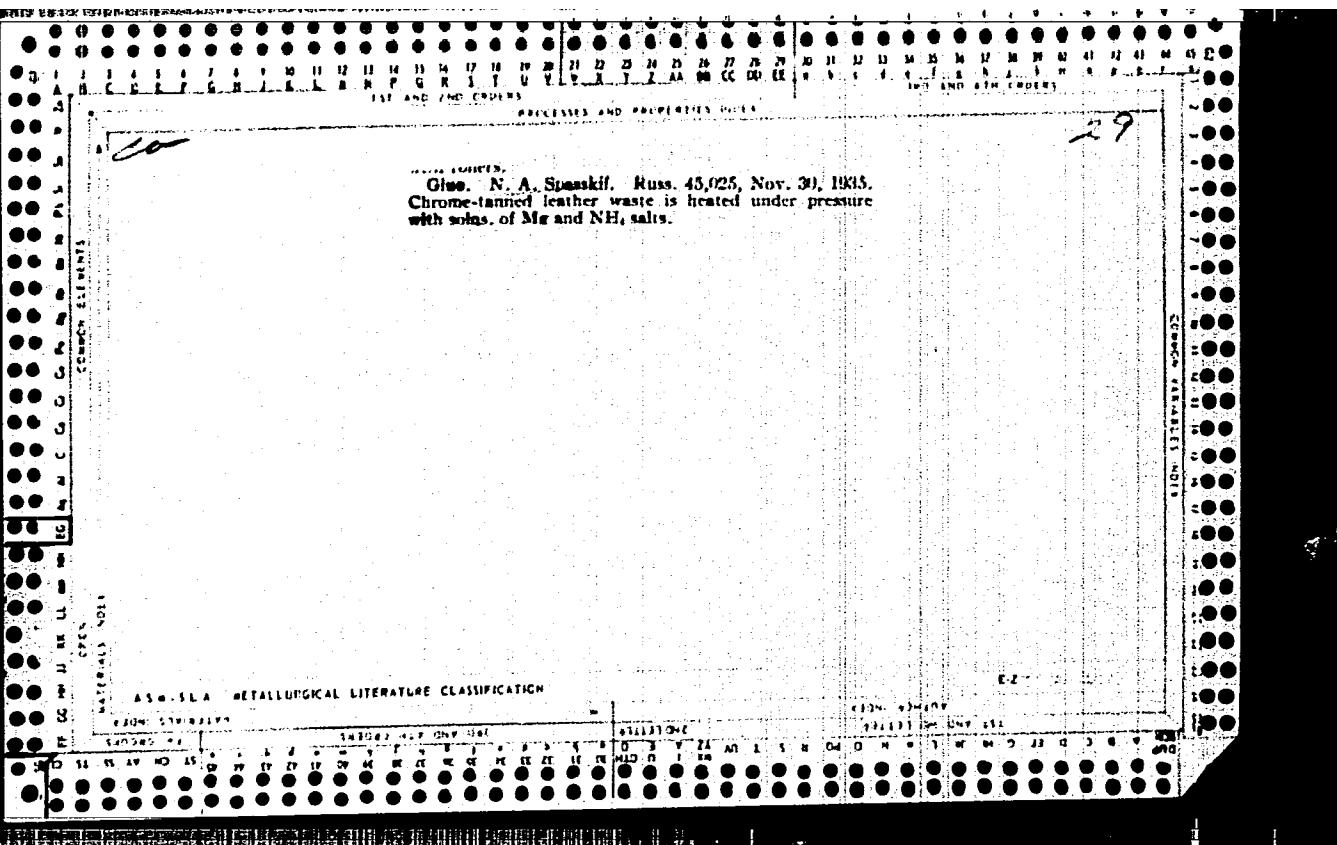
SUB CODE: 11, 13, 20 / SUBM DATE: 12Jan65 / ORIG REF: 002 / OTH REF: 004

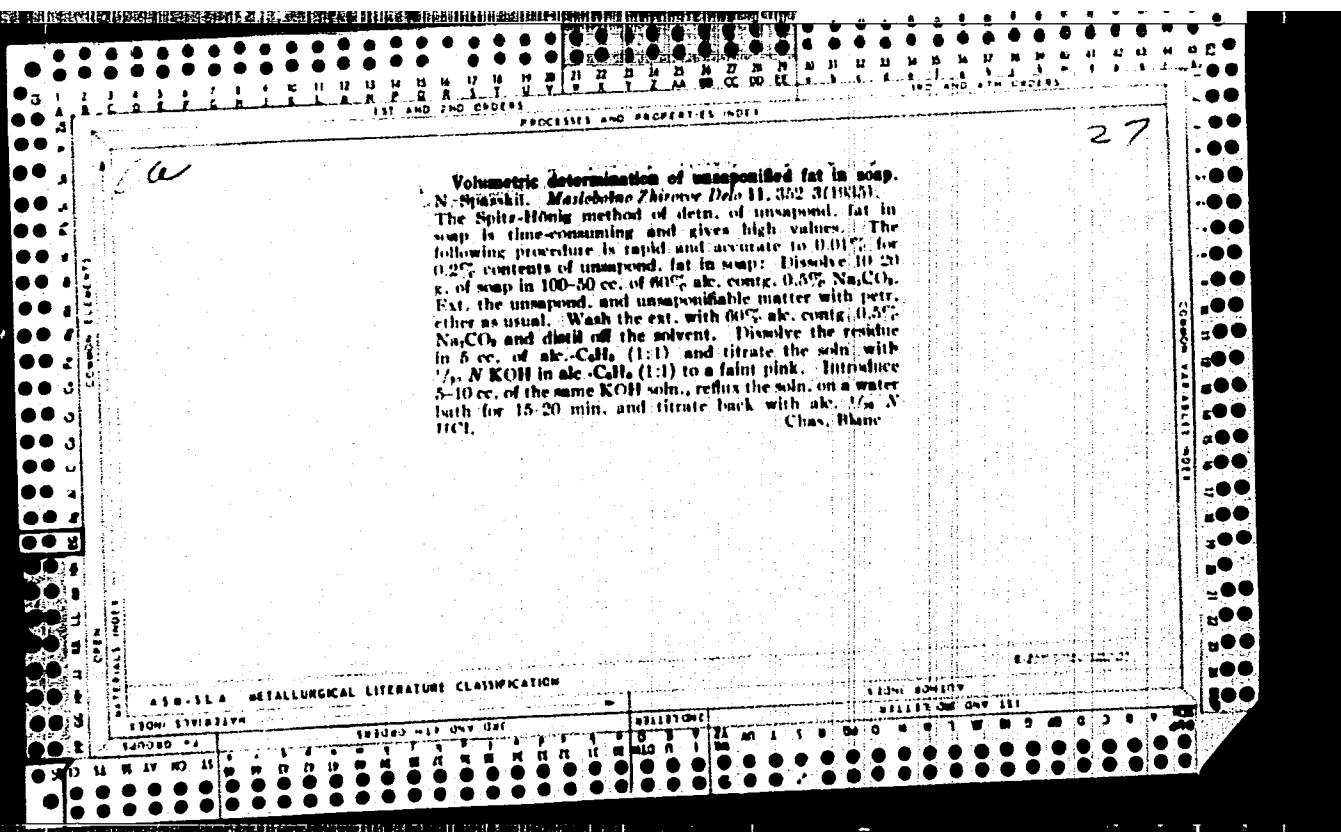
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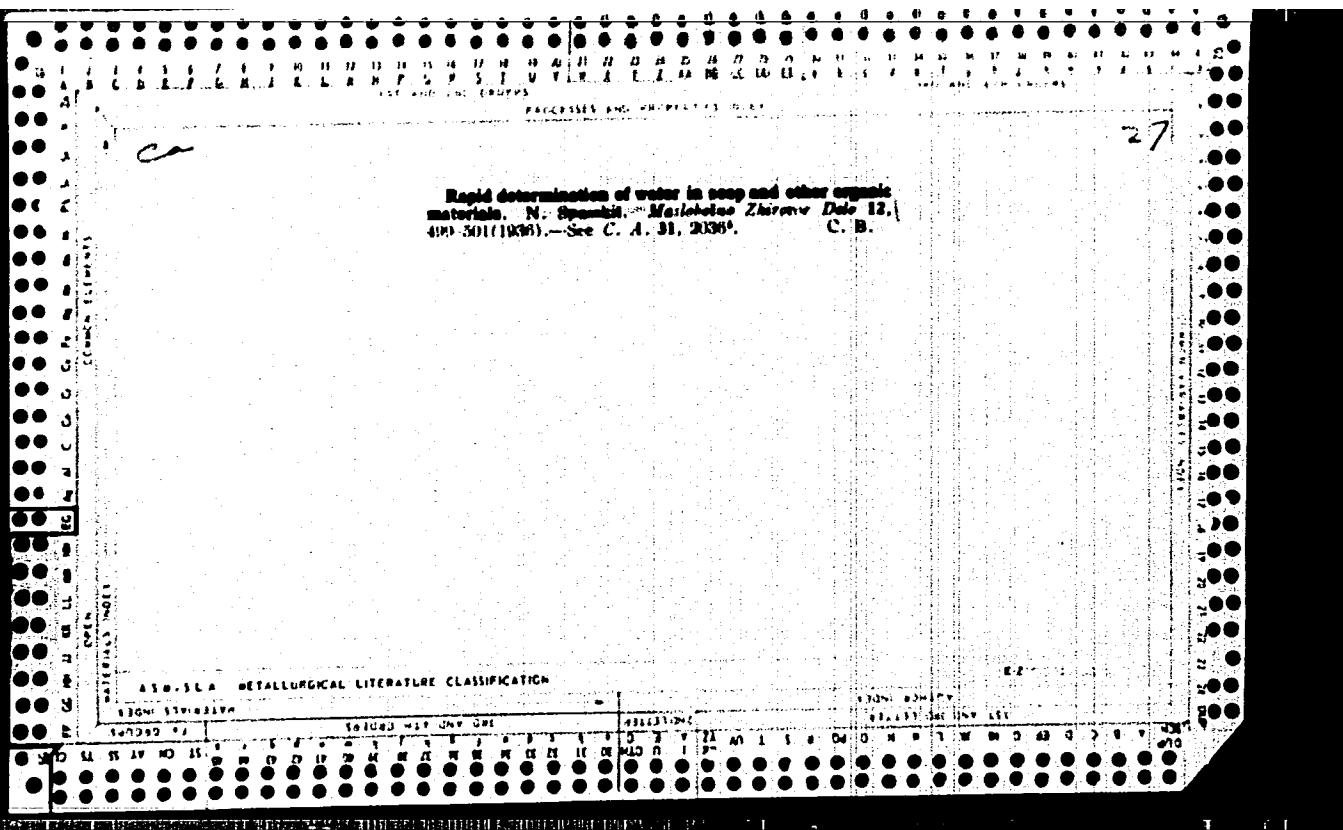
SPASSKIY, N.

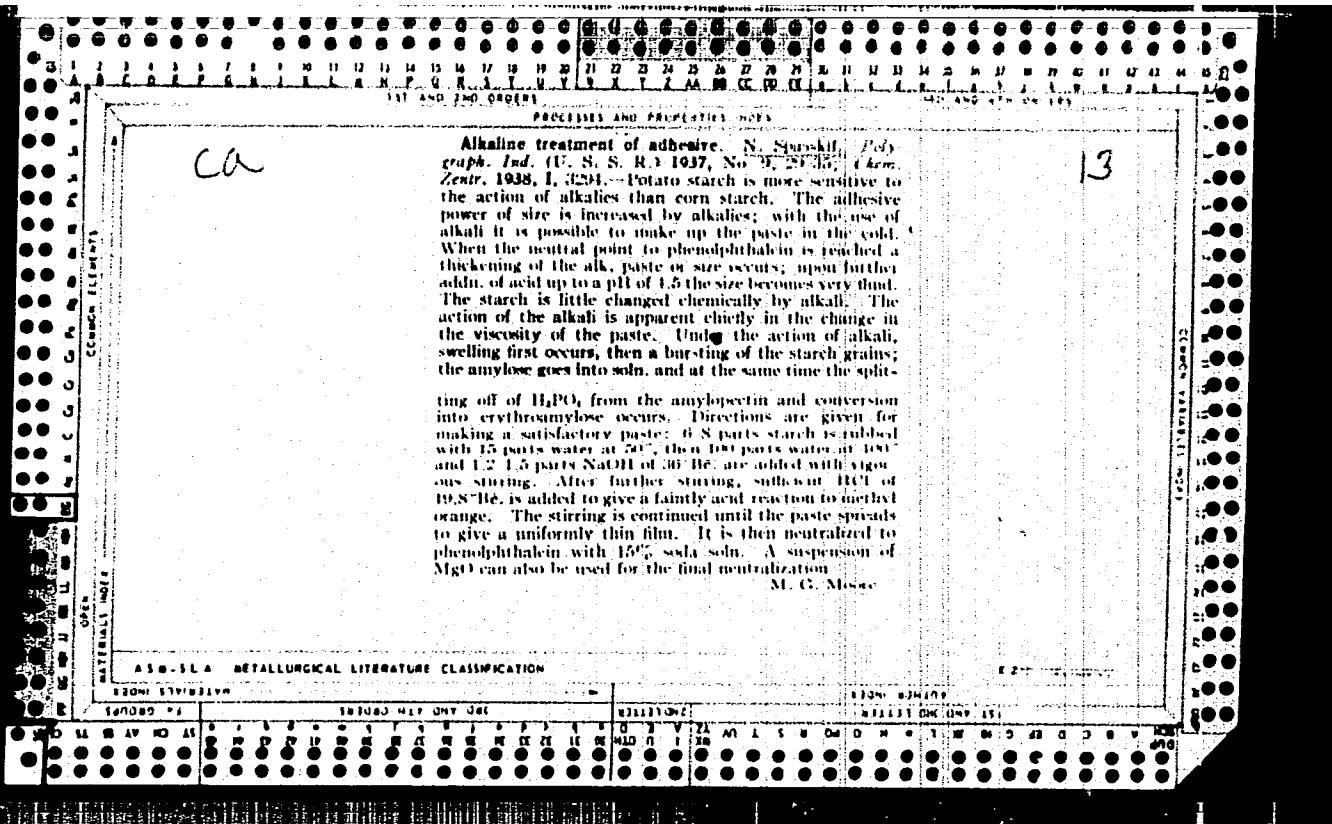
"Frozen" trade. Sov.torg. 33 no.6:57 Je '60. (MIRA 13:7)

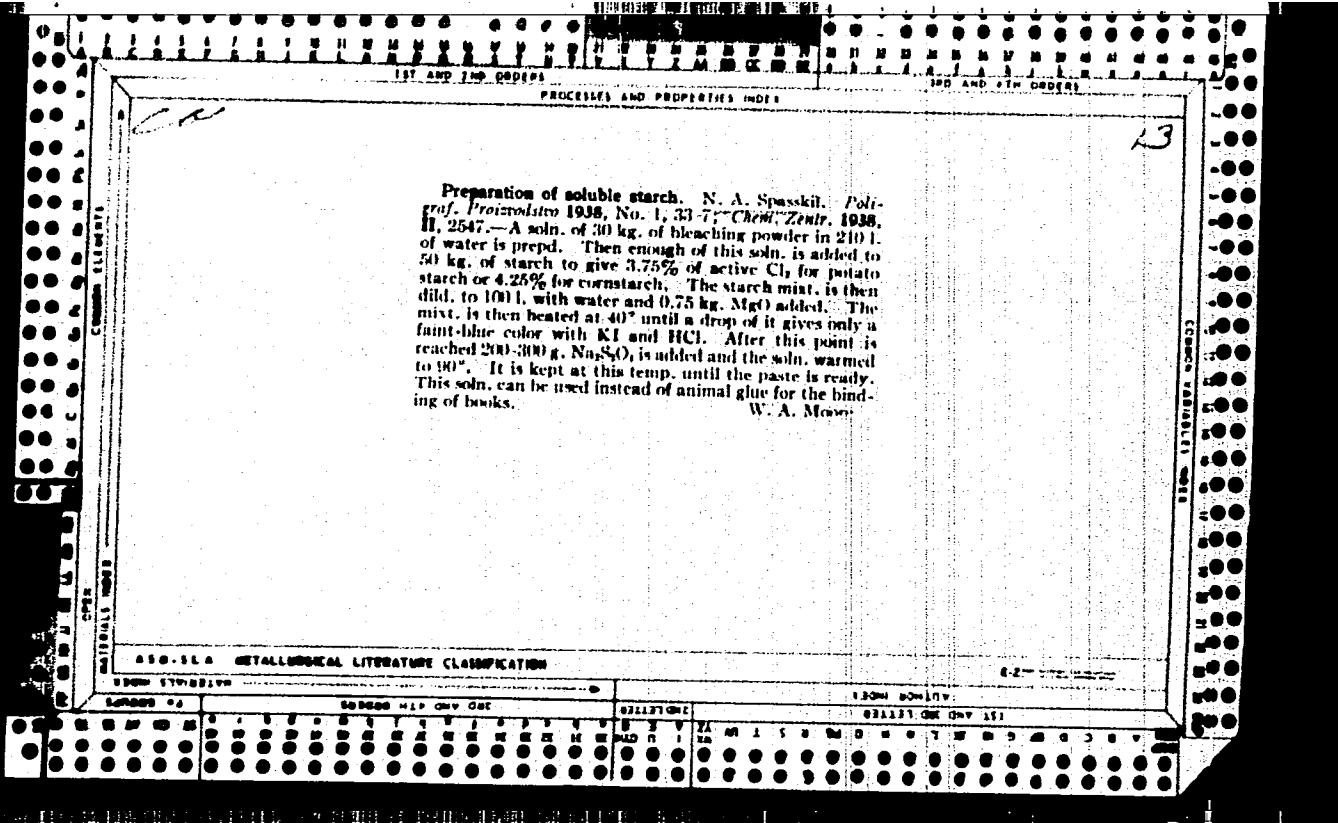
l. Nachal'nik tsekha morozhenogo Magnitogorskogo kholodil'nika,  
g. Magnitogorsk.  
(Magnitogorsk--Ice cream industry)











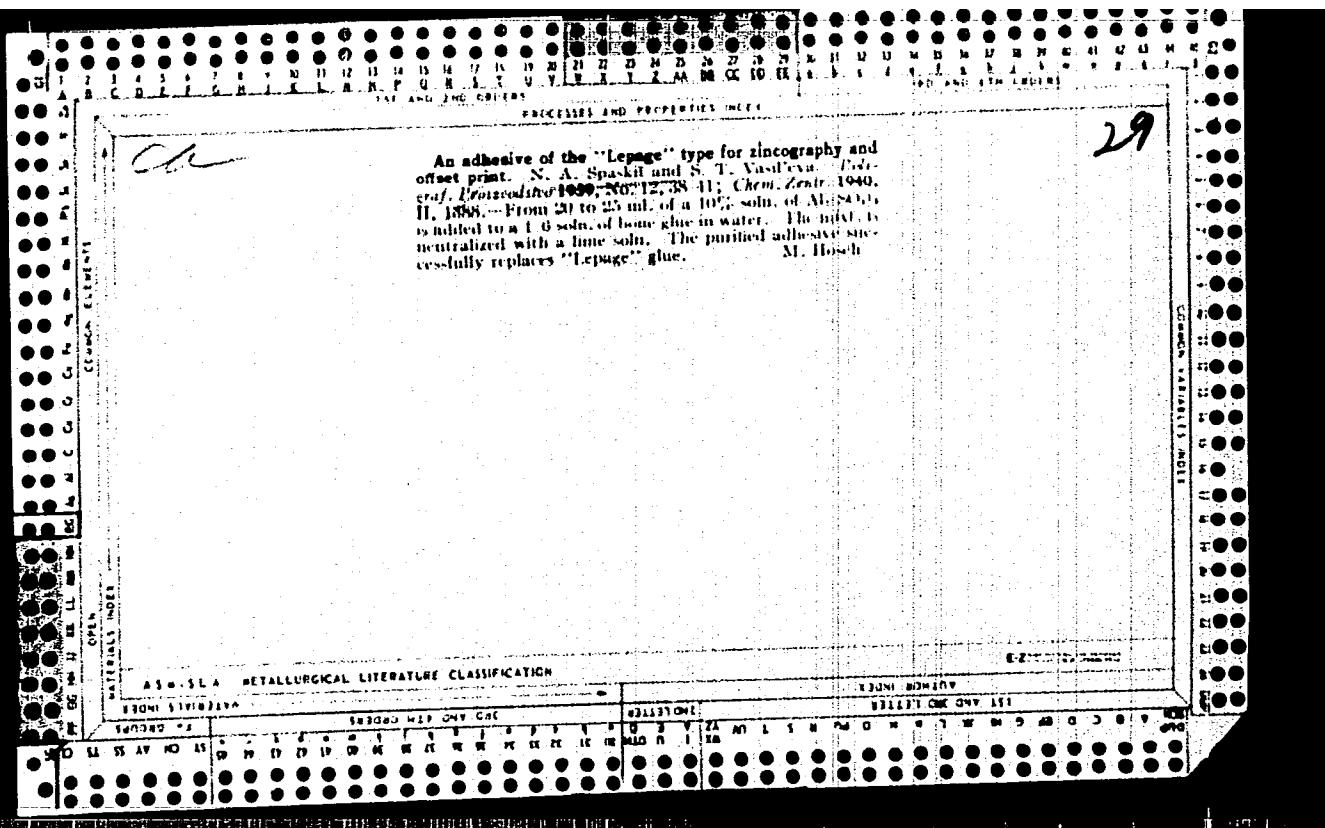
13

Book-binding adhesive from starch oxidized with  
caromic acid. N. Spasskii and S. Vasil'eva. *Prilozh.  
Promstogo* 1938, No. 11, 35-6; *Chem. Zentral.* 1939, II,  
307.—The starch is oxidized with  $K_2Cr_2O_7$  and  $H_2SO_4$  at  
about 40°, then neutralized with milk of lime, NaOH and  
Na silicate. The mixt. so obtained is condensed to a paste  
on the water bath and used either cold or warm.

M. G. Monroe

ASB, SLA METALLURGICAL LITERATURE CLASSIFICATION

130M. DOMAIN  
METALLURGY



CA

51

Preparation of stable starch adhesive. N. A. Spanklik.  
*Poligraf. Prezdrojno 1959, No. 8, 25-6.*—Starch adhesive which does not thicken nor lose H<sub>2</sub>O for several days is prep'd. by heating and stirring starch with CaCl<sub>2</sub> or MgCl<sub>2</sub> soln. Starch concn. up to 15% can be used. Stabiliza<sup>n</sup>tion is effected by 0.25-1.0% of the salts. A typical recipe for light paper adhesive: 60-80% starch, 10 ml. 25% MgCl<sub>2</sub> soln., 1 ml. 10% NaOH, 1 ml. 20% 2-naphthol soln., and 90-25 ml. H<sub>2</sub>O. For heavier work, up to 120 g. starch is used. G. M. Kosolapoff

CA

13

*Preparation of starch-urea printing rolls.* N. A. Spuskil.  
*Poligraf. Prezesskno 1951, No. 3, 31-2.*—The following  
formulations are recommended for rolls of varying hardness:  
starch 34-6, urea 18-19, glycerol 8-6, and min. of MgCl,  
(d. 1.32) 40-50%. The MgCl salt is preheated to 70°  
in the presence of a little starch to prevent congealing.  
The rods are made in preheated (80-80°) molds and the  
actual time of heating the finished product is 1.5-2.0 hrs. at  
75° followed by 3-4 hrs. at 80°. Full directions are given  
for use and for reclamation of the materials. G. M. K.

SPASSKIY, N.A.

[Glue for bookbinding work] Klei dlja perepletnykh rabot. Mo-  
skva, Iskusstvo, 1953. 263 p. (MLRA 6:12)  
(Glue)

~~SPASSKIY, N.A.; BERLYANT, I.Ya.,redaktor; LAUT, V.G.,tekhnicheskij  
redaktor~~

[Gluing household objects] Skleivanie predmetov domashnego obikhoda.  
Moskva, Vses. koop. izd-vo, 1956. 39 p.  
(Gluing) (MLRA 10:4)

SPASSKIY, N.N.

D ECEASED  
C 1961

1962/6

SEE ILC

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GUTNIK, M.A.; BORISOV, L.F.; NOVIKOV, I.K.; SPASSKIY, N.N.; OVCHINNIKOV, A.N.; STOLYAROV, A.B.; KLAVID, A.V.; GALKINA, V.I.; SHALFEYEV, V.I.

Overall mechanization of decorative grinding and polishing operations. From. energ. 17 no.9:6-8 S '62. (MIRA 15:8)  
(Grinding machines)

SPASSKIY, N.N.

Organizing topographical surveying in the cities. Geod. 1  
kart. no.11:49-51 N '62. (MIRA 15:12)  
(Topographical surveying)

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CIA-RDP86-00513R001652630010-7

SPASISKIV, N. Ya.

"Middle Devonian Four-Ray Corals of the Western Slope of  
the Urals." Cani Geol-Min Sci, Leningrad Mining Inst, Leningrad,  
1953. (RZhGeol, Sep 54)

SO: Sum 432, 29 Mar 55

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CIA-RDP86-00513R001652630010-7"

SPASSKIY, N.Ya.

Significance of Tetracoralla in the stratigraphy of the middle  
Devonian of the western slope of the Urals. Trudy VNIGRI no.90:  
91-224 '55. (MLRA 10:2)

(Ural Mountains--Corals, Fossil)

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BUBLICHENKO, N.L.; DUBATOLOV, V.N.; MAKSIMOVA, Z.A.; SPASSKIY, N.Ya.

Paleontological basis for the stratigraphy of Rudnyy Altai.  
Trudy Alt. GMNII AN Kazakh.SSR 6:3-39 '58. (MIRA 12:1)  
(Altai Mountains--Paleontology)

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SPASSKIY, N.Ya.

Rugose corals in the lower and middle Devonian of the  
Urals. Zap. LGI 36 no. 2:48-70 '59.  
(Ural Mountains--Rugosa) (MIRA 13:12)

SPASSKIY, Nikolay Yaroslavovich; NALIVKIN, D.V., akademik, glav. red.;  
BUL'VANKER, N.L., doktor geologo-mineral. nauk, otv. red.;  
BUL'VANKER, E.Z., kand. geologo-mineral. nauk, red.; ABKEVICH,  
P.L., red. izd-va; IVANOVA, A.G., tekhn. red.

[Paleontological basis of the Paleozoic stratigraphy in the  
Rudnyy Altai] Paleontologicheskoe obosnovanie stratigrafii  
paleozoia Rudnogo Altaia. Moskva, Gos. nauchno-tekhn. izd-  
vo lit-ry po geol. i okhrane nedor. No.3. [Devonian Tetracoralla  
in the Rudnyy Altay] Devonskie chetyrekhluchevye korally Rudnogo  
Altaia. 1960. 142 p. (MIRA 14:8)

(Altai Mountains—Rugosa)